PHE 48.2 T991

Form 2

TYPHOID FEVER

Department of Health
Commonwealth of Pennsylvania

TYPHOID FEVER

Typhoid fever is an entirely preventable disease. It is caused by the typhoid bacillus, or Bacillus Typhosus. This germ has nothing to do with typhus fever, which is an entirely different disease. Enteric fever is another name for typhoid. Typhoid pneumonia has no connection with typhoid fever; it is simply pneumonia with delirium and other symptoms which are also found with typhoid fever.

Typhoid fever is an intestinal disease and the digestive tract of a patient is consequently infected with the typhoid germs. Anything, therefore, which may be contaminated by the body discharges is infectious and dangerous. The urine, also, will contain typhoid bacilli.

How It Spreads. Fingers, food and flies are the common spreaders of typhoid.

The germs must be swallowed to produce the disease. It is not contracted in any other way. Through carelessness on the part of the nurse, the convalescent patient or a carrier or through improper disinfection and disposal of the body discharges the germs may get into water supplies, milk or foods. Every case comes from a previous one or from a carrier.

A polluted water or milk supply and foods which have become infected and are then eaten without being cooked are the agencies transmitting typhoid indirectly from person to person.

Outdoor surface toilets are notable spreaders of typhoid fever by polluting the water supplies through the excreta washing over the surface of the ground or by seep-

age into the ground water. Flies which may have access to privies, to soiled bed clothing or to bed chambers may spread typhoid by crawling over the food.

The Typhoid Carrier. A typhoid carrier is a person who is infected with typhoid germs and who occasionally discharges them but who is not ill nor has any symptoms of this disease. About two percent. of all persons who have had typhoid fever become typhoid carriers. Following an attack the typhoid bacilli usually die or disappear. Some carriers cease being such early but others are known to be discharging typhoid bacilli for as many as thirty or forty years after their attack. Some few persons become infected and develop into typhoid carriers without ever having any symptoms of the disease.

A carrier may infect anything he touches. It may be foods which are to be eaten by other persons. This is particularly so with milk, in which the typhoid germs thrive and multiply with amazing rapidity. Foods which are eaten uncooked or foods which after being cooked are handled by a typhoid carrier are dangerous.

It is very difficult to detect the typhoid germs in the body discharges. Failure to find them, however, does not indicate that it is safe for a suspected carrier to handle milk or food which others may consume. Neither is it entirely safe for a person to handle food for sale, to work on a dairy farm, in a grocery store, in a restaurant or to prepare any food or drink to be used by others if typhoid bacilli had once been found in his discharge even though subsequent examination indicated their absence.

The uncontrolled typhoid carrier is a great spreader of the disease.

Prevalence. Typhoid fever is rapidly decreasing in Pennsylvania. In 1906 there were 3917 deaths from this disease within its boundaries. In 1924 there were only 356. This is a reduction in the death rate from 54.8 to 3.9 per 100,000 of population in eighteen years. It has been accomplished by improvement in public water supplies, by better sewage disposal and by an improved control over milk and food supplies. The further extension of such improvements, the detection and rigid control of carriers and improved sanitary arrangements in rural districts will eventually eliminate typhoid fever entirely.

Symptoms. The incubation period of typhoid fever varies considerably. However, it is usually from ten days to two weeks.

Typhoid fever usually begins with a headache, although for several days previously the person may have felt badly. During this period lack of ambition or appetite is noticeable. There may be some bleeding from the nose. Fever then develops. Every case of continued fever, if without apparent cause, should suggest typhoid fever. When these symptoms appear a physician should be promptly consulted. Early proper treatment is important.

To complete the diagnosis laboratory examinations are sometimes advisable. The most practical one is the Widal test. For this examination a small specimen of blood is sent to the laboratory where its action on live typhoid bacilli is determined. This test will rarely be of value before the seventh to the tenth day of the illness.

About the third week the intestines contain numerous ulcers which are exceedingly fragile. Any movement or jar of the patient, any pressure on the abdomen or any solid or improper food may easily damage these tender patches and produce a dangerous hemorrhage or perforation and resultant death.

Care of the Patient. A well-conducted hospital with its equipment for baths and proper nursing is the safest place to treat typhoid fever. But the patient should be moved there as soon as the diagnosis is made. He should not be transported in the third or fourth week when he is dangerously sick.

The patient, wherever treated, must be kept quiet and all visitors forbidden entrance until the physician permits otherwise. Visitors not only disturb the patient but they can easily contract the disease. The patient's lips, hands and body may be infected with typhoid germs.

The sick room should be screened and kept absolutely free from flies.

All bed clothing, sheets, pillow cases, nightgowns, napkins, towels, wash cloths, sponges, handkerchiefs, etc., when used or changed should be bundled up while in the patient's room and forthwith boiled.

The nurse should keep a pan of antiseptic solution in the room for the disinfection of her hands immediately after each handling of the patient or the bedding. The use of the antiseptic solution should be followed by rinsing in clean water.

Sterilize the Discharges. Both the urine and the bowel discharges, as well as any-

thing which may be coughed up or vomited, must be thoroughly disinfected. Bichloride of mercury or corrosive sublimate is not effective for sterilizing body wastes and may be a source of danger to others.

A double handful of fresh, unslaked lime, in lumps, will sterilize the discharges if put upon them while they are warm. It is advisable to break up all solid particles in the stool before beginning the sterilization process.

Chlorinated lime is effective as a disinfectant. To use it, two heaping tablespoonfuls from a can which has not been opened for over three or four days is added to a quart of water and thoroughly shaken up in a closed jar. Two tablespoonfuls of this solution added to each body discharge will sterilize it.

After the disinfecting solution is added the wastes should be well stirred and then carefully covered to keep out flies. After a half hour they may be emptied into a city sewer or into a cesspool. They should never be thrown upon the surface of the ground or into any watercourse. If the city sewer or cesspool is not available the sterilized discharges should be placed in a trench dug where water supplies cannot be contaminated. Each deposit should be sprinkled with fresh chlorinated lime and covered with earth. The ground about the trench should be frequently limed and the trench should be shovelled in when the contents reach to within a foot of the ground surface.

The water employed for washing or bathing the patient must also be sterilized after use by boiling, which is best, or by adding a cupful of the chlorinated lime solution.

No milk can be sold or handled by a person living on a farm where typhoid fever exists.

The County Medical Director may permit the herd to remain on the dairy farm, the milking and care of the utensils to be done by some person who does not live on the farm and who will cleanse and care for the milk buckets and other utensils on his own premises. The members of the household wherein typhoid fever exists must have nothing to do with the dairy business or the utensils.

The state regulation, however, allows the milking to be done by some member of the typhoid household if the milk is sent to a condensing or powdering plant. The milkman, though, is not permitted to come in contact in any way with the patient nor to handle his discharges, bedding, clothes or other things coming from the sick room. The condensery must not separate the cream from this milk for the purpose of selling it as raw cream or converting it into ice cream or butter. Any plan adopted for conducting the dairy business must be approved by the County Medical Director.

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